

REMARKS

This Amendment is provided in response to the Office Action mailed July 16, 2003, which rejected claims 36-51. In response, the applicant has hereinabove provided amendments to claims 36, 44-47, and 49-51. These amendments do not introduce new matter and will not provide an undue burden upon the Examiner.

Request for Interview

The Applicant's representative requests an interview at a time after such time that the Examiner has reviewed the subject matter of the amended claims herein but before preparing an Office Action on the merits. This interview is justified because despite the protracted prosecution there remain unresolved issues of claim construction impeding this case moving to issuance. An interview will be profitable in discussing these issues and facilitating passing allowable subject matter to issuance. Attached is the requisite for PTO-413A requesting the interview, with the proposed time left to the Examiner's determination for his convenience. The Examiner may reach Applicant's representative at either the phone number or fax number below to communicate the desired interview date and time.

Rejection of Claims 44, 45, and 50 under 35 USC 112, 2nd Paragraph

These claims were rejected as being indefinite. The claims have been amended herein to eliminate the reliance on the comparative term "substantially." Reconsideration and withdrawal of the rejection are respectfully requested.

Rejection of Claims 36-51 Under 35 USC 112, 1st Paragraph

These claims were rejected for lack of written description requirement.

Claims 36, 47, 49, 50 and 51

These claims were rejected on the Examiner's asserted basis that regarding the ratio of disc diameter to housing width "there is a complete lack of support for the newly claimed range of 0.65 to 0.88." (OA of 7/16/2003, pg. 4) Note that the range has been amended to 0.66 to 0.88 that is used for the present discussion.

Effectively the Examiner attempts to penalize the Applicant by permitting the claimed subject matter no broader breadth than the preferred embodiment. This is disingenuous at best and has no basis in the law.

There is adequate support in the disclosure of the application to reasonably convey to a skilled artisan that the Applicant had possession at that time to the claimed matter. For example, without limitation:

There is a continuing need for faster computers with greater capacity....The present invention is also directed to a disc drive having a standard housing configuration containing a stack of rigid recording discs having smaller than standard diameters without reducing the data capacity of the drive. The present invention is also directed to a disc drive having a standard housing configuration containing a stack of rigid recording discs having smaller than standard diameters and a shorter actuator arm for reduced seek times.

(pg. 2 line 8 to pg. 3 line 9, emphasis added)

In one embodiment of this aspect of the invention, the disc drive housing has a standard 3½ inch external three-dimensional configuration. The stack of rotatable rigid magnetic recording discs comprises discs having a diameter of 84 mm each.

(pg. 3 lines 20-23, emphasis added)

The present invention is directed to an improved disc drive requiring less inertia for the actuator arm and a shorter average seek time without sacrificing drive capacity or the form factor of the disc housing, or significantly increasing power requirements of the spindle motor. The disc drive of the present invention requires less power to rotate a disc at a given speed. One form of the disc drive of the present invention achieves higher disc rotational velocities without significantly increasing power requirements of the spindle motor. Since higher operating temperatures of a disc drive accelerates disc drive failure, the present invention achieves improved performance without increasing failure due to temperature.

(pg. 9 lines 17 – 26, emphasis added)

FIGS. 3 and 4 illustrate a top view and section view of a disc drive 100 in accordance with one embodiment of the present invention.

(pg. 9 lines 27 – 28, emphasis added)

Surface 116 forms a reduced receiver portion within housing 102 to receive the smaller discs.

(pg. 11, lines 27 – 28, emphasis added)

The footprint of the drive is 101.6 mm by 146 mm, as in the prior art. However, only about 91.4 mm (3.6 inches) of the width of the drive is required for the drive components.

(pg. 17 lines 14 – 16, emphasis added)

By reducing the diameter of the discs over the standard discs previously employed, and by reducing the spacing between the discs over the disc spacing previously employed, windage and pressure variations are reduced, resulting in thereby improving the non-repeatable runout characteristics of the disc drive of the present invention over those of the prior art.

(pg. 18 lines 21 – 26, emphasis added)

Clearly a skilled artisan recognizes these and other passages describe the continuum in which the size of the discs affects the operating speed and capacity of the disc drive. The preferred embodiment is described with particularity in order to meet the best mode requirement. However, it is clear to the skilled artisan that in balancing the trade-offs the effects are defined generally along the continuum; for example, a smaller (84 mm) disc offers greater speed for a given power input but less data storage area – an even-smaller (68 mm) disc offers relatively greater speed for a given power input but relatively less data storage area. There is nothing in the disclosure, or in the knowledge of the skilled artisan, that substantiates the assertion that the continuum is in any way disrupted; for example, a smaller size disc always offers less data storage space – that relationship does not change in moving away from the preferred embodiment.

The Examiner does not point to any passage in the disclosure that in any way identifies the preferred embodiment as an essential element of the invention. All the passages relied upon refer to the preferred embodiment. The Examiner erroneously concludes from Table 1 that the Applicant only contemplated the 84 mm diameter. If this is correct, then the Applicant must provide test data for every diameter contemplated, which is clearly not necessary to the skilled artisan in order to understand the scope of the claimed subject matter, nor is this required under the written description requirement of 35 U.S.C. §112, 1st paragraph.

The Applicant traverses the present rejection because the disclosure reasonably conveys the Applicant had possession of the invention as claimed. Reconsideration and withdrawal of the present rejection are respectfully requested.

Claims 42, 46, 48 and 50

These claims were rejected on the Examiner's asserted basis that regarding the disc speed the Examiner "finds no support for any speed over 10,000 rpm." (OA of 7/16/2003, pg. 5)

Once again, in effect the Examiner attempts to penalize the Applicant by permitting the claimed subject matter no broader breadth than the preferred embodiment. This is disingenuous at best and has no basis in the law.

There is adequate support in the disclosure of the application to reasonably convey to a skilled artisan that the Applicant had possession at that time to the claimed matter. The Applicant points again to the portions of the disclosure set forth above and incorporates them herein also. Furthermore, for example but without limitation:

There is a continuing need for faster computers with greater capacity. This need is met in the disc drive industry by a combination of factors, including...reducing the latency to reaching a desired location on a track....With increasingly improved spindle motors, it is possible to spin the discs faster to thereby improve data rates and reduce latency.
(pg. 2 lines 8 - 19, emphasis added)

The present invention is directed to a disc drive having a standard housing configuration containing a stack of rigid recording discs that are rotated at increased speed without increasing the power consumption of the drive.
(pg. 3 lines 1 - 3, emphasis added)

As above, clearly a skilled artisan recognizes these and other passages describe the continuum in which the speed of the discs affects the operating speed and capacity of the disc drive. The preferred embodiment is described with particularity in order to meet the best mode requirement. However, it is clear to the skilled artisan that in balancing the trade-offs the effects are

relationally defined generally along the continuum; for example, a faster (10,000 rpm) disc offers less latency than a 7500 rpm speed – an even-faster (15,000 rpm) disc offers relatively less latency. There is nothing in the disclosure, or in the knowledge of the skilled artisan, that substantiates the assertion that the continuum is in any way disrupted; that is, a faster disc speed always offers less latency – that relationship does not change in moving away from the preferred embodiment.

The Examiner does not point to any passage in the disclosure that in any way identifies the preferred embodiment as an essential element of the invention. All the passages relied upon refer only to the preferred embodiment.

The Applicant traverses the present rejection because the disclosure reasonably conveys the Applicant had possession of the invention as claimed. Reconsideration and withdrawal of the present rejection are respectfully requested.

Claims 37-39, 40, 41, 43-45

These claims stand rejected but not explained in the Office Action of 7/16/2003. The Applicant traverses the rejection of these claims for the reasons above. Reconsideration and withdrawal of the present rejection are respectfully requested.

Rejection of Claims 36 and 51 Under 35 USC 102(b)

These claims were rejected as being anticipated by Takatsuka et al. (JP 04-205776 A). Takatsuka discloses a disc diameter to housing width ratio of 0.65 rounded to two decimal places. The Applicant has amended these claims to claim a lower limit of 0.66, obviating the present rejection. Based on this amendment, it is clear that Takatsuka does not disclose all of the limitations as presently claimed. Reconsideration and withdrawal of the present rejection are respectfully requested.

Rejection of Claims 37-50 Under 35 USC 103(a)

These claims were rejected as being unpatentable over Takatsuka et al. (JP 04-205776 A).

Claims 37-46

These claims are allowable as dependent claims depending from independent claim 36, which is allowable for reasons stated above, and providing additional limitations thereto. Reconsideration and withdrawal of the present rejection are respectfully requested.

Claim 47

In order to substantiate a prima facie case of obviousness the Examiner must set forth prior art references that, alone or in combination, disclose all the limitations of claimed subject matter. Claim 47 has been amended to explicitly recite the disc diameter being within the range of 68 mm to 89 mm. Takatsuka does not disclose this limitation and as such cannot substantiate an obviousness rejection. Reconsideration and withdrawal of the present rejection are respectfully requested.

Claims 48-50

These claims are allowable as dependent claims depending from independent claim 47, which is allowable for reasons stated above, and providing additional limitations thereto. Reconsideration and withdrawal of the present rejection are respectfully requested.

Conclusion

The amendments herein are proper, do not add new matter, and serve to obviate all rejections. Accordingly, Applicant respectfully requests reconsideration and allowance of all pending claims. The Examiner is invited to telephone the undersigned for expeditious resolution of any outstanding or

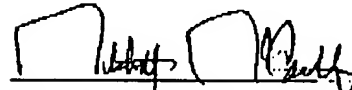
additional issues that may arise.

Respectfully submitted,

Seagate Technology LLC

(Assignee of the Entire Interest)

1/16/2004
Date



Mitchell K. McCarthy, Reg. No. 38794

Seagate Technology LLC

Intellectual Property - SHK2LG

13021 West Reno Ave

Oklahoma City OK 73127

USA

405-577-7239 (telephone)

405-324-4118 (facsimile)